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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,515	09/23/2005	Wilmert De Bosscher	016782-0334	4514

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FOLEY AND LARDNER LLP
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EXAMINER

BAND, MICHAEL A

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

01/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,515

Applicant(s)

DE BOSSCHER, WILMERT

Examiner

MICHAEL BAND

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) 1, 3 and 5-15 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2, 4 and 16-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/23/2005

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species II, claims 2, 4, and 16-19 in the reply filed on 10/2/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1, 3, and 5-15 are withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al (US Patent No. 5,591,314) in view of Lynn et al (US Patent No. 6,375,815).

With respect to claims 2, 4, and 16-19, Morgan et al discloses an apparatus to releasably affix a rotating cylindrical magnetron target [10] to a spindle [20] with a flange [22] utilizing a threaded spindle collar engaging threads (i.e. spiral groove) [80] on the outside surface of the target (abstract; fig. 1). Fig. 1 depicts a spring (resilient member) [70] engages the spiral (i.e. helical) groove [80] at an end of the target [10] and a clamp

ring (i.e. seal) [40] engages an o-ring groove [50] in the flange [22] of the spindle [20], where an interface ring (i.e. spindle ring) [30] engages the a mating surface [12] of said target [10] (col. 5, lines 27-64). The diameters of the interface ring and target grooves are approximately equal since they interlock with each other. However Morgan et al is limited in that the target has a grooved outside instead of a grooved inside.

Lynn et al teaches a cylindrical target [200] attached to a rotatable support spindle [100] with a flange [102] (abstract; fig. 8). Fig. 8 depicts a retainer (i.e. interface) ring [206] with grooves [208] on the outside and the target [200] has grooves on the inside that mate with each other (col. 2, lines 29-50). Lynn et al cites the advantages as reliability of the target, decrease in the time required to change out the target, decrease coolant leaks, improve structural integrity of the target, and provide an even distribution of clamping pressure (col. 2, lines 18-28). Lynn et al also cites that this arrangement is an improvement over Morgan et al (US Patent No. 5,591,314) (col. 1, lines 58-67; col. 2, lines 1-6).

It would have been obvious to one of ordinary skill in the art to use a target with inside grooves and an interface ring with outside grooves taught by Lynn et al instead of a target with outside grooves and an interface with inside grooves since it is the substitution of functionally equivalent grooves for attaching the target to the interface groove in addition to providing the advantages of reliability of the target, decrease in the time required to change out the target, decrease coolant leaks, improve structural integrity of the target, and provide an even distribution of clamping pressure over Morgan et al.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Nos. 5,096,562; 5,620,577.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Band whose telephone number is (571) 272-9815. The examiner can normally be reached on Mon-Fri, 8am-4pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B./

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/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795